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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/921,589	08/03/2001	Michael Wen-Chein Yang	POLY-1194	1853

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EXAMINER	
HAMILTON, CYNTHIA	

ART UNIT	PAPER NUMBER
1752	10

DATE MAILED: 07/30/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

48-10

Office Action Summary	Application No.	Applicant(s)	
	09/921,589	YANG ET AL.	
	Examin r	Art Unit	
	Cynthia Hamilton	1752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence addr ss --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *5/06/02, 5/13/02, 5/23/02, 7/1/02* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *10-14,17 and 18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *10-14, 17-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *3,6,8,9* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. Information Disclosure Statements

a. The information disclosure statement (IDS) submitted on May 6, 2002 (Paper # 6) was filed after the mailing date of the office action on January 16, 2002. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner is considering the information disclosure statement.

b. The information disclosure statement (IDS) submitted on May 23, 2002 (Paper no. 8) was filed after the mailing date of the first action on January 16, 2002. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner is considering the information disclosure statement. All references already considered of record as part of previous IDSs filed as Paper No. 3 and Paper No. 6 have been crossed out in this IDS and marked as already considered and duplicate citations. References marked AF, AG and AH are not these documents. Since these citations did not meet the requirements of 37 CFE 1.97 because the documents were not presented, they were crossed out. What were presented were three Derwent English abstracts and not three Chemical Abstracts. FG reference was struck from the record because no reference of such a number was part of the IDS cited by applicants nor was a copy supplied as required by 37 CFR 1.97. What was cited in the IDS noted by applicants was JP 53-023705.

c. The information disclosure statement (IDS) submitted on July 1, 2002 (paper No. 9) was filed after the mailing date of the Office Action on January 16, 2002. The

submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner is considering the information disclosure statement.

d. Applicants reference a PTO Form 1449 attached to the Office Action issued January 16, 2002 that states the serial number, filing date and docket number of another application. The examiner is unable to find such a form. The only PTO-1449 in the record and initialed has no Serial number, i.e. has "Not Yet Assigned" for the Serial Number and has the Poly -1194 that appears to be the same docket number as in this application. If this PTO-1449 does not belong in this application then applicants need to clarify that it does not. It is now part of an official paper in this application and has the Serial number stamped on the first page of the IDS letter accompanying it. All 10 pages of the PTO-1449 presented in Paper No. 3 are the same as the 10 pages submitted in the IDS submitted on May 23, 2002 down to the same "Not Yet Assigned" for the Serial No. Thus, the examiner encloses a copy of the initialed IDS that should be part of Paper No. 3 and has marked it Paper No. 3, filed August 3, 2001 and marked the IDS filed May 23, 2002 as Paper No. 8 to avoid confusion.

2. Claims 1-9 and 15-16 have been cancelled. Claims 10 and 13 have been amended. Claims 10-14, 17-18 remain for examination. Applicants have amended claims to require the presence of one of the listed "at least one binder " in the ablation layer wherein cellulosic polymers no longer are one of the at least one binders. Thus, the newly limited invention is not anticipated by Scott paper Company (GB 1 492 070) wherein the binder used is nitrocellulose. The newly amended invention of claim 13 requires that if a polyurethane is chosen for the "photopolymerizable layer" set forth in claim 12 that it be an acid modified acrylate polyurethane

or an amine-modified acrylate polyurethane. The examiner notes that the invention of claim 13 does not exclude the selection of another included member of the list in claim 12 besides the polyurethane. Thus, the newly amended claim 13 is broader in scope than the original claim 13 because the presence of be an acid modified acrylate polyurethane or an amine-modified acrylate polyurethane is no longer required by the element defined, e. g. an element with acrylonitrile and no polyurethane at all is now within the limits of the newly amended claim 13. The examiner states this to make clear the scope of the rejections that follow.

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 10-14, 17-18 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. With respect to instant claims 1-18, the photosensitive element claims requires the presence of "at least one ablation layer which is ablatable by infrared radiation and opaque to non-infrared actinic radiation, ..., the infrared ablation layer comprising: at least one infrared absorbing material ; and at least one binder that is a polyacetal, polyacrylic, polyimide, polybutylene, polycarbonate, polyester, polyethylene, polyphenylene ether, or polyethylene oxide; wherein the ablation layer is ablatable from the surface of the photopolymerizable layer upon exposure to infrared laser radiation." The original specification

and claims do not disclose this generic ablation layer drawn to infrared ablation and infrared absorbing material with the exception of showing with Example 3 that polyamide slip containing Uvinul D 50 are not ablatable with a YAG laser which is an infrared laser and that they are with a CO2 laser at an infrared wavelength of 10.6 um. The CO2 laser imaged material is also found to be a poor choice because of the poor resolution obtained indicating damage to the photopolymerizable layer. The laser to be used with respect to the originally filed application "should be such that the laser treatment can ablate the slip film without damage to the photopolymer layer just beneath" as set forth on page 13, lines 9-12. Thus, there is no generic disclosure to the instant element because there is no generic disclosure to using an infrared ablatable layer or such a layer with an infrared absorbing material. Further, there is no disclosure made to a photosensitive element without the presence of a dopant having a high extinction coefficient in the ultraviolet range. The broader "non-infrared actinic radiation" is not fully supported by the original disclosure and claims. Finally, the only support for a layer that could be ablated by infrared laser is that in Example 3 specific to a polyamide. The instant binders for the infrared ablatable layer do not have a polyamide listed as a choice. With respect to instant claim 13, there is no support for a photopolymerizable layer with both the materials of claim 12 and the materials of claim 13 present simultaneously.

5. Applicant's arguments filed May 13, 2002 have been fully considered but they are not persuasive. Applicants traverse the rejection of claims 1-14 and 17-18 under 35 USC 112, first paragraph, as lacking adequate written description "because the specification allegedly does not describe an ablation layer ablatable by infrared radiation". They state that a claimed invention not be described in ipsis verbis to comply with the written description requirement but that all

that is required is that it reasonably convey to persons skilled in the art that, as of the filing date thereof, the inventor had possession of the subject matter later claimed by him. They cite In re Edwards as support. The examiner agrees that this is the standard to be met. Thus, the issue is whether review of the original specification and claims, as a whole, would convey to the worker of ordinary skill in the art that applicants invented what is claimed. See In re Gosteli, 872 F.2d. 1008, 1012, 10 USPQ2d 1614, 1618 (Fed. Cir. 1989). See also MPEP 2163.02. Applicants cite In re Smythe to set the standard of "adequate written description" and it is "provided if a skilled artisan, upon review of a patent specification in light of the properties and features of what is described, would envision the claimed subject matter." In rendering a decision in In re Edwards, the court in their opinion (page 284 of 178 USPQ 279) stated, "Each case must be decided on its own facts." They also make clear on that in cases where unpredictability, such as "chemical cases", in performance of certain species or subcombinations other than those specifically enumerated, one skilled in the art may be found not to have been placed in possession of a genus or combination claimed at a later date in the prosecution of a patent application. In Smythe, the facts revolved around what would naturally occur to one skilled in the art from reading the description of the specification. The examiner agrees that this is the standard to be met to remove the issue of adequate description. The MPEP in 2163.02 sets forth the examiner's burden in this manner:

The subject matter of the claim need not be described literally (i.e., using the same terms or in haec verba) in order for the disclosure to satisfy the description requirement. If a claim is amended to include subject matter, limitations, or terminology not present in the application as filed, involving a departure from, addition to, or deletion from the disclosure of the application

as filed, the examiner should conclude that the claimed subject matter is not described in that application. This conclusion will result in the rejection of the claims affected under 35 U.S.C.112, first paragraph - description requirement, or denial of the benefit of the filing date of a previously filed application, as appropriate.

Applicants have presented claims more generic than the original claims. The written description requirement for a claimed genus may be satisfied through sufficient description of a representative number of species. The examiner believes applicants have failed to show enough IR ablatable layer species to claim the genus without a statement in the original specification to the genus. She has pointed that only one IR ablatable layer was disclosed and that one layer that was not IR ablatable under IR imaging conditions given was disclosed. Thus, the unpredictability of the chemical art of ablatable layers is demonstrated to the worker of ordinary skill in the art by applicants' disclosure which supports the examiner's stand that one species is insufficient to represent the entire genus of IR ablatable layers over all laser ablatable layers used by applicants, both UV and IR ablatable. The one species is also specific to an IR ablatable layer with a UV absorber present and a photopolymerizable layer imageable in the UV. Thus, applicants have not presented the broader generic ablatable layer where the UV absorber is not present nor another photopolymerizable layer outside the UV range, e.g. a layer polymerizable in the visible range. Applicants have not established that the original disclosure would lead a worker of ordinary skill in the art to "envision" only IR ablatable layers to use all the binders set forth in the original specification. The original disclosure encompassed both UV and IR ablatable layers but only under certain conditions. Applicants try to set the non working ablation example also in the IR range as evidence of a second species, but the examiner believes that this

is evidence that a worker of ordinary skill in the art at the time of filing would not have concluded all the IR range and all the binders listed by applicants could be used with the UV photopolymerizable layers given. Further, there is nothing in the record that would lead workers in the art to "envision" applicants intended any other element other than one with a UV photopolymerizable layer was part of applicants invention. On page 6 of the instant specification, applicants state their objective is to make laser-imageable printing plates but this is already generally known in the art at the time as they have already set forth in the background. The next objection level set forth is "to provide a UV absorbing layer for a photocurable article that can be conveniently and accurately removed by laser ablation from the article." Thus, the issue of UV absorbing is part of the laser ablatable layer as part of the solution of a conveniently and accurately imageable plate from the beginning. Thus, the examiner believes a worker of ordinary skill in the art would understand this to be a limit of any plate set forth by applicants. The next step in the limits set forth by applicants is "to provide a UV absorbing and photoablatable layer for a photocurable article comprising ... polymeric matrix and ... a dopant having a high extinction coefficient in the range of 300-400 nm, the layer responding to a threshold dosage of radiation at a selected wavelength by photoablation of the polymeric matrix. Higher up on the same page of the specification applicants stated "The inventors have discovered that if a slip film, of the type already in use with flexographic plates, is modified with a strong UV absorber, a laser can be used to engrave the slip film instead of the photopolymer. Thus, applicants' invention revolves around the addition of the strong UV absorber into the ablatable film. Thus, the UV dopant is key to applicants' invention as they describe it in their specification. The examiner believes that this is sufficient evidence to make a worker of

ordinary skill in the art to expect a UV absorbant to be present at all times in any element that would meet applicants disclosed invention as originally filed. Such a limit is not present in applicants' claims 10-13 and 17-18. The examiner also believes that the worker of ordinary skill in the art upon believing such a UV absorber is always present in applicants' element would also believe that the photopolymerizable layer would always have to be polymerizable in the UV range. Thus, the examiner believes that this need for UV opacity in the ablatable layer is so strongly set forth by the original specification that workers of ordinary skill in the art would not assume layers of opacity in other non-IR ranges such as the visible range were included. The examiner also notes that on page 8, applicants reference "It is critical that the UV absorption be nearly complete..." Thus, the original disclosure is evidence that the UV absorption is critical. This is evidence that applicants by omission of this one element raise the issue whether the applicant had possession of the broader, more generic invention. See, e.g., Gentry Gallery, Inc. v. Berkline Corp., 134 F.3d 1473, 45 USPQ2d 1498 (Fed. Cir. 1998); Johnson Worldwide Associates v. Zebco Corp., 175 F.3d 985, 993, 50 USPQ2d 1607, 1613 (Fed. Cir. 1999) and MPEP 213.05. The original specification as a whole directs the worker of ordinary skill in the art to use a laser ablatable layer with the UV absorber present that would work with the accompanying UV photopolymerizable layer. Applicants argue that because UV absorbing layers are used and all UV absorbing layer are non infrared absorbing layers that the inclusion of all non infrared absorbing layers then one skilled in the art would have "realized that Applicants were in possession of an ablation layer that is opaque to non-infrared actinic radiation". The standard is not "realized" here, but envisioned. The examiner believes that the entire tenor of the original specification would not have lead workers of ordinary skill in the art to the "non-

infrared" standard set forth by the instant claims. There is no broader understanding of "UV absorber" as there is for "fluid" in In re Smythe. There is no indication that applicants meant to encompass more than ablatable layers that had the UV absorber present or elements that were other than UV polymerizable. There are no species outside the UV photopolymerizable genus in the original specification. The rejection stands for the reasons given.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

> (e) the invention was described in-
> (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
> (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 10-14, 17-18 are rejected under 35 U.S.C. 102(e) or (a) as being anticipated by Fan (6,238,837 B1) (and EP equivalent EP 0741330 A1) and optionally further evidenced by Toda et al (4,045,231), Heinz et al (4,430,417) and Chen (4,323,636) cited by Fan in col. 4, lines 26-29, to disclose block polymers to be used by Fan. Fan (6,238,837 B1) cited by applicants has a filing date of May 1, 1995 which is before the filing date of the oldest effective filing date of the same application, i.e. 08/479,339 filed June 7, 1995. However, the oldest effective filing date is June 25, 1993 drawn to a continuation-in-part of US sn 08/082,689. The examiner has read this oldest application and found the same data supporting an IR ablatable layer in both the current application and the oldest application. It is a series of tests showing that the YAG laser does not ablate the instant layers but the CO2 laser does with specific polyamide layers, but also damages the underlying polymerizable layer. However, the CO2 laser does work. However, the instant claims 10-18 are the only support found for the breadth of scope now claimed by applicants and that date of claim submission is August 3, 2001. Thus, Fan is seen as prior art with respect to these claims wherein support is not found in the applications as filed. Fan anticipates the instant element wherein butadiene-styrene block polymers are listed as one choice of binder in the photopolymerizable layer and triblocks such as those of Heinz et al in col. One and those of Chen in col. 1 inclusive of styrene-isoprene and styrene-butadiene di and tri block elastomers. The examiner notes the element claimed by Fan is limited to the presence of a

monomer as well as an elastomeric binder. However, the process of imaging with an infrared ablatable layer comprised of a binder that can be a polyamide or hydroxypropylcellulose is disclosed in the examples. In Fan, see particularly Abstract, col. 2, lines 8-10, 23-28, col. 3, lines 48-65, col. 4, lines 20-31, 55-61, col. 5, lines 65-67, col. 6, lines 1-35, col. 7, lines 55-63, col. 9, lines 10-col. 10, lines 48, col. 12, lines 8-col. 13, lines 40, Examples and claims. Thus, with respect to instant claims 10-14, 17-18, the elements of Fan anticipate the instant elements and are held to inherently absorb infrared radiation at a wavelength of 10.6 um.

6. Applicant's arguments filed May 13, 2002 have been fully considered but they are not persuasive. Applicants argue that Fan (6,238,837) does not anticipate applicants invention because support for claims 10-14, 17-18 is given in parent application 08/082,689. Applicants argue that their evidence that the parent application has sufficient support is found in their arguments that there is sufficient support for the original disclosure to cause these claims to be adequately described in the original application. The examiner has already set forth her reasons as to why the disclosure in the parent application is inadequate. Claim 13 has been added because of its newly amended form. The rejection stands.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia Hamilton whose telephone number is (703) 308-3626. The examiner can normally be reached on Monday-Friday, 9:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Baxter can be reached on (703) 308-2303. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305 0661.

Cynthia Hamilton
July 28, 2002

CYNTHIA HAMILTON
PRIMARY EXAMINER